BIOLOGICAL BASIS OF BEHAVIOR
PSYC 2220

Class Hours: 3.0      Credit Hours: 3.0
Laboratory Hours: 0.0  Date Revised: Spring 2015

Catalog Course Description:
Course includes basic anatomy of the brain and nervous system, understanding the biological determinants of human behavior, and the role of biological systems in learning, perception, emotion, memory and mental illness.

Entry Level Standards:
Must be able to read and write at the college level and be computer literate.

Prerequisite:
PSYC 1030

Textbook(s) and Other Course Materials:

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Global issues of Biological Psychology</td>
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<tr>
<td>2</td>
<td>Nerve cells and nerve impulse</td>
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<tr>
<td>3</td>
<td>Synapses and drugs</td>
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<tr>
<td>4</td>
<td>Anatomy of the nervous system - Exam One (Chapters 1, 2, 3, 4)</td>
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<tr>
<td>5</td>
<td>Development and evolution of the brain</td>
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<tr>
<td>6</td>
<td>Vision, Nonvisual sensory systems</td>
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<td>7</td>
<td>Movement - Exam Two (Chapters 5, 6, 7, 8)</td>
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<tr>
<td>8</td>
<td>Rhythms of wakefulness and sleep</td>
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<tr>
<td>9</td>
<td>Regulation of internal states – Research Project</td>
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<tr>
<td>10</td>
<td>Hormones and sexual behavior</td>
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<td>11</td>
<td>Emotional behavior and stress – Exam Three (Chapters 9, 10, 11, 12)</td>
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<tr>
<td>12</td>
<td>Learning and memory – Optional Research Critiques 1, 2, 3, 4</td>
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</tbody>
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II. Course Goals

The course will:

A. Introduce the structure and function of the nervous system. V.3, I.6
B. Cover the major parts of the brain and their primary functions. V.4
C. Increase student’s understanding of the major brain systems involved in emotion, cognition, and behavior. I.6, III.3
D. Foster the ability to read and write reports on current research in biological psychology. I.3, III.2
E. Expand student understanding of the various aspect of brain development III.2, V.5
F. Expand student understanding of major theories and theorists in Biological Psychology III.4

*Roman numerals after course objectives reference General Education goals

IV. Expected Student Learning Outcomes

Students will:

1. Identify the structure of cells that make up the nervous system. A, E
2. Describe the function of cells that make up the nervous system. A, E
3. Describe the role of neurotransmitters in behavior, and how drugs affect behavior by affecting neurotransmitters. A, C
4. Identify the role that different regions in the brain and nervous system play in influencing behavior, mood, movement, cognition, memory, and perception. B, C, E
5. Label structures of the brain. A
6. Label structures of the nervous system. A
7. Label structures of the sensory systems. A
8. Identify the causes of disorders of mood, perception, movement, memory, and cognition. A, C
9. Identify the treatments of disorders of mood, perception, movement, memory, and cognition. A, C
10. Identify important theorists and researchers in biological psychology and be able to describe their theories, discoveries, and methods of investigation. F
11. Locate and evaluate current research materials (papers, book chapters, etc.) in biological
V. Evaluation:

A. Testing Procedures: 83% of grade

Five 100 point examinations are scheduled for the semester. They may be objective, short answer, essay, or a combination of these methods of assessment. They encompass all lectures, discussions, audio/video presentations, and assigned readings. Test items will require recall, recognition, and application of content. Examination dates are in the Schedule of Instruction. No make-up exams will be given. An optional comprehensive final exam will be given during exam week to make up for a missed or low exam score. Student's score on the final will substitute for a missing exam or replace the lowest test score.

B. Laboratory Expectations:

N/A

C. Other Assignments: 17% of grade

Students will choose one of the following projects to complete field work.

1. Research paper:
   Students may write a research paper on an approved topic for 100 points of credit. The paper is due the 12th week of class. It must be between five and six pages in length, typed, double-spaced, with appropriate references. Topics must be submitted in writing during 4th week of class. Approved topics include the following:

   Animal research in biological psychology
   Sexual motivation
   Behavioral medicine
   Sleeping and dreaming
   Biofeedback
   Surgical control of behavior
   Biological causes of mental illness
   Biological basis of learning
   Brain disease
   Drugs and addiction
   Emotion and physiology
   Genetic predispositions
   Hunger and thirst
   Infant brain development
   Left./right brain research
   Methods of research in biological psychology
   Psychoneuroimmunology

2. Research Article Critiques:

   Students may write a set of four critiques of articles dealing with biological psychology topics. Topics may be chosen from those listed under Research Paper. Each critique should deal with a different topic and should be approximately 350-500 words, typed, double-spaced, with a copy
of the article, and should include a title page. These critiques are also due the 12th week. Each is worth 25 points for a total of 100 points.

D. Grading Scale:

<table>
<thead>
<tr>
<th>Final Grade</th>
<th>Cumulative Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>540-600+</td>
<td>90%-100%</td>
</tr>
<tr>
<td>B+</td>
<td>510-539</td>
<td>85%-89%</td>
</tr>
<tr>
<td>B</td>
<td>480-509</td>
<td>80%-84%</td>
</tr>
<tr>
<td>C+</td>
<td>450-479</td>
<td>75%-79%</td>
</tr>
<tr>
<td>C</td>
<td>420-449</td>
<td>70%-78%</td>
</tr>
<tr>
<td>D</td>
<td>360-419</td>
<td>60%-69%</td>
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<tr>
<td>F</td>
<td>Below 360</td>
<td>Below 60%</td>
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VI. Policies:

A. Attendance Policy:

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

B. Academic Dishonesty:

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one’s own work.
- Taking an exam for another student.
- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

C. Accommodations for disabilities:

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students
must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. Disability Services may be contacted by sending email to disabilityservices@pstcc.edu, or by visiting Alexander 130. More information is available at http://www.pstcc.edu/sswd/.